(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 27 January 2005 (27.01.2005)

PCT

(10) International Publication Number WO 2005/008597 A2

(51) International Patent Classification7: G06T 11/00

(21) International Application Number:

PCT/IB2004/051150

(22) International Filing Date: 7 July 2004 (07.07.2004)

(25) Filling Language:

English

(26) Publication Language:

English

(30) Priority Data: 03102178.5

16 July 2003 (16.07.2003)

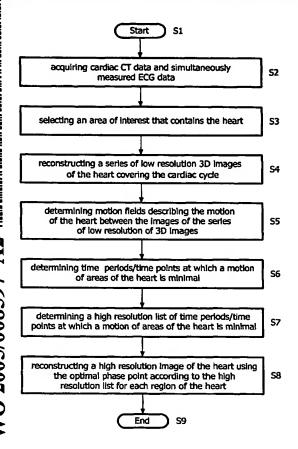
- (71) Applicant (for DE only): PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH [DE/DE]; Steindamm 94, 20099 Hamburg (DE).
- (71) Applicant (for AE, AG, AL, AM, AT, AU, AZ, BA, BB, BE, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CY, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,

SE, SG, SK, SL, SY, SZ, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW only): KONINKLIJKE PHILIPS ELECTRONICS N. V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Bindhoven (NL).

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): KÖHLER, Thomas [DE/DE]; c/o Philips Intellectual Property &, Standards GmbII Weisshausstr. 2, 52066 Aachen (DE). GRASS, Michael [DE/DE]; c/o Philips Intellectual Property &. Standards Gmb11 Weisshausstr. 2, 52066 Aachen (DE). KUHN, Michael, Harald [DE/DE]; c/o Philips Intellectual Property &, Standards GmbH Weisshausstr. 2, 52066 Aachen (DE). PROKSA, Roland [DE/DE]; c/o Philips Intellectual Property &, Standards GmbH Weisshausstr. 2, 52066 Aachen (DE).
- (74) Agent: MEYER, Michael; Philips Intellectual Property &, Standards GmbH Weisshausstr. 2, 52066 Aachen (DE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

[Continued on next page]

(54) Title: RECONSTRUCTION OF AN IMAGE OF A MOVING OBJECT FROM VOLUMETRIC DATA



(57) Abstract: In the CT imaging of non-homogeneously moving objects such as the heart or the coronary vessel tree, there is a problem that different parts of the objects are at rest at different points in time. Thus, a gated reconstruction with a globally selected time point does not yield a sharp image of such objects. According to the present invention, a motion of the object is estimated, describing the motion of selected regions of these objects. Then, on the basis of the estimated motion, time points are determined, where these areas have minimal motion. Then, an image is reconstructed, wherein the data from which the respective regions are reconstructed, correspond to the respective time points, where the regions have minimal motion. Due to this, an improved image qualify maybe provided.

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, HD, HL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GII, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.